

## Technical Data Sheet

***Polytrope* STR 1050EU-01 NATURAL**

Polyolefin, Enhanced TPO

**Product Description**

*Polytrope* STR 1050EU resin is a high melt strength thermoformable TPO that balances impact resistance and high stiffness, enabling processors and end users to reduce product weight and improve processing efficiency without sacrificing product performance. It can be extruded in smooth or textured surfaces, or co-extruded with a *Polytrope* STR enhanced polyolefin cap resin to further customize its durability, appearance, or feel for interior and exterior applications. The capability of *Polytrope* STR 1050EU to provide an exceptionally smooth surface in extrusion and thermoforming makes it well suited to lamination processes with decorative films. It is also easily colored and is paintable by standard TPO paint systems.

<b>Processing Method</b>	Coextrusion; Extrusion; Profile Extrusion; Sheet Extrusion
<b>Attribute</b>	Good Melt Strength; Good Toughness; Good Weather Resistance; Low Coefficient of Linear Thermal Expansion; Paintable; Recyclable Material
<b>Forms</b>	Pellets

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
<b>Physical</b>					
Melt Flow Rate, (230 °C/2.16 kg)	0.50	g/10 min	0.50	g/10 min	ISO 1133
Density - Specific Gravity, (Method A)	1.14	g/cm <sup>3</sup>	1.14	g/cm <sup>3</sup>	ISO 1183
<b>Mechanical</b>					
Tensile Stress at Yield, (Type 1, 23 °C, 50 mm/min)			26.0	MPa	ISO 527-2
Tensile Strain at Break, (Type 1, 233 °C, 50 mm/min)	230	%	230	%	ISO 527-2
Flexural Modulus, (23 °C, 2.0 mm/min, Type 1A, Chord)			3280	MPa	ISO 178
<b>Impact</b>					
Instrumented Dart Impact, (-21 °C, Total Energy, Ductile Failure)			43.6	J	ASTM D3763
Notched Izod Impact					
(-30 °C, 3.18 mm, Injection Molded, Flow)			48	J/m	ASTM D256
(23 °C, 3.18 mm, Injection Molded, Flow)			750	J/m	ASTM D256
<b>Thermal</b>					
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)			114	°C	ISO 75-2/B
Coefficient of Linear Thermal Expansion (CLTE), Flow (TMA), (-30 to 100 °C)			4.0E-5	cm/cm/°C	ASTM E831
<b>Optical</b>					
Gloss, (60°, 3180 μm, Smooth, Thermoformed)	20 to 40		20 to 40		ISO 2813
<b>Additional Information</b>					
Heat Sag, (148.889 °C, 3.2 mm) 8 inch span, two point support		0 in			ASTM D3769
<b>UL Information</b>					
Flame Rating, (3.2 mm)		HB		HB	UL 94